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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/485,525	02/09/2000	DOROTHEA LAMPE	P99,2604	2026

7590

03/24/2003

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EXAMINER

RYMAN, DANIEL J

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 03/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/485,525

Applicant(s)

LAMPE ET AL.

Examiner

Daniel J. Ryman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 March 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: on page 2 lines 27-29 "To this end ... are checked." is not a complete sentence. On page 4, line "greater then 3%" should be "greater than 3%."

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 10-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soumiya et al (USPN 5,583,857).
4. Regarding claim 10, Soumiya discloses a method for statistical multiplexing of ATM connections comprising: conducting a plurality of ATM connections over a common connecting line (col. 5, lines 48-56 and col. 7, lines 12-28), the plurality of ATM connections having an effective bandwidth reserved for conduction of the aggregate of the plurality of ATM connections on the connecting line (col. 17, lines 24-54) and utilizing an acceptance algorithm that allocates potential added connections to one of a first class (Fig. 19: step 202 VBR) and a second class (Fig. 19: step 202 CBR) (col. 17, lines 15-23), and deciding whether an additional potential added connection can be accepted by the common connecting line based on acceptance criteria and a prescribed effective bandwidth (col. 7, lines 19-64 and col. 17, lines 15-67), the

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deciding step comprising the steps of identifying the prescribed effective bandwidth on a step-by-step basis with at least one of a setup and a release of connection (col. 17, lines 15-59), wherein the identification starts from an initial value and the acceptance algorithm is performed at every step (col. 17, lines 15-59) where, although not expressly stated, it obvious that there is an initial value such that the process either begins with a zero effective bandwidth upon initialization if no calls are yet allocated bandwidth or it is initialized with the bandwidth of any connections the line will carry at initialization; determining whether at least one of the additional potential added connection or a released connection may be accepted by at least one of the first class and the second class (col. 7, lines 19-64 and col. 17, lines 15-67); defining a first bandwidth representative of the first class (V) and a second bandwidth representative of the second class (VX) (col. 17, lines 28-54), modifying at least one of the first and second bandwidths by at least one of a first traffic parameter value and a second traffic parameter value based on the acceptance of the additional potential added connection to at least one of the first class and the second class (col. 17, lines 15-67 and col. 18, line 17-col. 19, line 43); and at least one of accepting and rejecting the additional potential added connection based on at least the identified prescribed effective bandwidth and the acceptance criteria (col. 17, lines 54-62 and col. 21, lines 4-29) where at least one of the acceptance criteria is that the total effective bandwidth including the potential added connection is less than the physical bandwidth. While Soumiya possibly does not expressly disclose that the estimated bandwidth is equivalent to effective bandwidth, it would have been obvious to one of ordinary skill in the art at the time of the invention that Soumiya's estimated bandwidth is equivalent to effective bandwidth (col. 17, lines 24-43) where effective bandwidth is defined to be the average of the actual bandwidth of the connections.

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5. Regarding claim 11, referring to claim 10, Soumiya discloses that the first traffic parameter value is a sustainable cell rate and the second traffic parameter value is a peak cell rate of the corresponding connection (col. 17, lines 15-67 and col. 18, line 17-col. 19, line 43).

6. Regarding claim 12, referring to claim 10, Soumiya discloses that at least one of the acceptance criteria is established such that, in the case of the connection setup, when the additional potential added connection can be accepted to the first class (VBR), a calculation is performed to determine whether the first bandwidth identified is adequate including this connection, wherein the first bandwidth is not allowed to exceed the sum of the peak cell rates of all connections (col. 18, lines 51-55 and col. 21, lines 4-29) where  $VH1$  is always less than or equal to  $PH1$  (peak cell rates) since  $VH1$  is not equal to  $PH1$  only when  $VH1$  is equal to  $AH1$  when  $AH1$  is less than  $PH1$ ; and the first bandwidth is incremented by the first traffic parameter value (sustainable cell rate which is equivalent to average cell rate,  $R_a$ ) (col. 18, lines 17-24 and col. 18, lines 51-55) when the at least one of the acceptance criteria (estimated peak cell rate is greater than average cell rate) is met (col. 18, lines 51-55) and the first bandwidth is incremented by the second traffic parameter value (peak cell rate,  $R_p$ ) (col. 18, lines 35-43 and col. 18, lines 51-55) when the at least one of the acceptance criteria is not met (col. 18, lines 51-55).

7. Regarding claim 13, referring to claim 12, Soumiya discloses that when the additional potential added connection cannot be allocated to the first class (VBR), it is automatically allocated to the second class (CBR) and the second bandwidth is incremented by the second traffic parameter value (peak cell rate) (col. 17, lines 15-67).

8. Regarding claim 14, referring to claim 10, Soumiya discloses that at least one of the acceptance criteria is established such that, in the case of the connection setup, when the

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additional potential added connection can be accepted to the first class (VBR), a calculation is performed to determine whether the first bandwidth identified is adequate including this connection, wherein the first bandwidth is not allowed to exceed the sum of the peak cell rates of all connections (col. 18, lines 51-55 and col. 21, lines 4-29) where  $VH1$  is always less than or equal to  $PH1$  (peak cell rates) since  $VH1$  is not equal to  $PH1$  only when  $VH1$  is equal to  $AH1$  when  $AH1$  is less than  $PH1$ ; and the first bandwidth is incremented by the first traffic parameter value (sustainable cell rate which is equivalent to average cell rate,  $Ra$ ) (col. 18, lines 17-24 and col. 18, lines 51-55) when the at least one of the acceptance criteria (estimated peak cell rate is greater than average cell rate) is met (col. 18, lines 51-55) and the first bandwidth is incremented by the second traffic parameter value (peak cell rate,  $Rp$ ) (col. 18, lines 35-43 and col. 18, lines 51-55) when the at least one of the acceptance criteria is not met (col. 18, lines 51-55). Although it is not expressly stated that at least one of the acceptance criteria is established such that, in the case of the connection release when the released connection can be accepted by the first class, a calculation is performed to determine whether the first bandwidth, exclusive of this connection, is adequate for the remaining connections, wherein the first bandwidth is not allowed to exceed the sum of the peak cell rates of all connections and the first bandwidth is diminished by the second traffic parameter value when the at least one of the acceptance criteria is met and the first bandwidth is diminished by the first traffic parameter value when the at least one of the acceptance criteria is not met, such a step would have been obvious to one of ordinary skill in the art at the time of the invention. Soumiya discloses, when a connection is not accepted, adjusting the values of the estimated bandwidths back to their original values (col. 21, lines 17-21). It is obvious that such steps are necessary in order to ensure that the total estimated bandwidth

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accurately reflects the current total bandwidth of all connections present on the connecting line. If this process did not take place, the total estimated bandwidth would reflect a greater amount of bandwidth present on the connecting line than is actually present. In a similar vein, when a connection is torn-down it would be obvious to decrement the estimated bandwidth using the same criterion as was used to estimate the bandwidth at establishment such that the total estimated bandwidth will accurately reflect changes within the line. If such a process did not take place, such that the bandwidth decremented at tear-down was not equal to the bandwidth incremented at set-up, total estimated bandwidth would be an inaccurate measurement for the total bandwidth of the system. It would have been obvious to one of ordinary skill in the art at the time of the invention to account for released connections by diminishing bandwidth according to the same criteria as was used to increase bandwidth during start-up in order to ensure that total bandwidth is accurate.

9. Regarding claim 15, referring to claim 12, Soumiya discloses that when the additional potential added connection cannot be allocated to the first class (VBR), it is automatically allocated to the second class (CBR) and the second bandwidth is incremented by the second traffic parameter value (peak cell rate) (col. 17, lines 15-67). Although it is not expressly stated that when the connection to be released cannot be allocated to the first class, it is automatically allocated to the second class and the second bandwidth is diminished by the second traffic parameter value. Soumiya discloses, when a connection is not accepted, adjusting the values of the estimated bandwidths back to their original values (col. 17, lines 55-62). It is obvious that such steps are necessary in order to ensure that the total estimated bandwidth accurately reflects the current total bandwidth of all connections present on the connecting line. If this process did

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not take place, the total estimated bandwidth would reflect a greater amount of bandwidth present on the connecting line than is actually present. In a similar vein, when a connection is torn-down it would be obvious to decrement the estimated bandwidth using the same criterion as was used to estimate the bandwidth at establishment such that the total estimated bandwidth will accurately reflect changes within the line. If such a process did not take place, such that the bandwidth decremented at teardown was not equal to the bandwidth incremented at set-up, total estimated bandwidth would be an inaccurate measurement for the total bandwidth of the system. It would have been obvious to one of ordinary skill in the art at the time of the invention to account for released connections by diminishing bandwidth according to the same criteria as was used to increase bandwidth during start-up in order to ensure that total bandwidth is accurate.

10. Regarding claim 16, referring to claim 11, Soumiya discloses that at least one of the acceptance criteria is established such that, in the case of the connection setup, when the additional potential added connection can be accepted to the first class (VBR), a calculation is performed to determine whether the first bandwidth identified is adequate including this connection, wherein the first bandwidth is not allowed to exceed the sum of the peak cell rates of all connections (col. 18, lines 51-55 and col. 21, lines 4-29) where  $VH1$  is always less than or equal to  $PH1$  (peak cell rates) since  $VH1$  is not equal to  $PH1$  only when  $VH1$  is equal to  $AH1$  when  $AH1$  is less than  $PH1$ ; and the first bandwidth is incremented by the first traffic parameter value (sustainable cell rate which is equivalent to average cell rate,  $Ra$ ) (col. 18, lines 17-24 and col. 18, lines 51-55) when the at least one of the acceptance criteria (estimated peak cell rate is greater than average cell rate) is met (col. 18, lines 51-55) and the first bandwidth is incremented by the second traffic parameter value (peak cell rate,  $Rp$ ) (col. 18, lines 35-43 and col. 18, lines



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51-55) when the at least one of the acceptance criteria is not met (col. 18, lines 51-55). Although it is not expressly stated that at least one of the acceptance criteria is established such that, in the case of the connection release when the released connection can be accepted by the first class, a calculation is performed to determine whether the first bandwidth, exclusive of this connection, is adequate for the remaining connections, wherein the first bandwidth is not allowed to exceed the sum of the peak cell rates of all connections and the first bandwidth is diminished by the second traffic parameter value when the at least one of the acceptance criteria is met and the first bandwidth is diminished by the first traffic parameter value when the at least one of the acceptance criteria is not met, such a step would have been obvious to one of ordinary skill in the art at the time of the invention. Soumiya discloses, when a connection is not accepted, adjusting the values of the estimated bandwidths back to their original values (col. 21, lines 17-21). It is obvious that such steps are necessary in order to ensure that the total estimated bandwidth accurately reflects the current total bandwidth of all connections present on the connecting line. If this process did not take place, the total estimated bandwidth would reflect a greater amount of bandwidth present on the connecting line than is actually present. In a similar vein, when a connection is torn-down it would be obvious to decrement the estimated bandwidth using the same criterion as was used to estimate the bandwidth at establishment such that the total estimated bandwidth will accurately reflect changes within the line. If such a process did not take place, such that the bandwidth decremented at tear-down was not equal to the bandwidth incremented at set-up, total estimated bandwidth would be an inaccurate measurement for the total bandwidth of the system. It would have been obvious to one of ordinary skill in the art at the time of the invention to account for released connections by diminishing bandwidth

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according to the same criteria as was used to increase bandwidth during start-up in order to ensure that total bandwidth is accurate.

11. Regarding claim 17, referring to claim 11, Soumiya discloses that the effective bandwidth is derived from the sum of the first and second bandwidth (Fig. 19, step 206'; col. 17, lines 24-62; and col. 21, lines 4-29).

12. Regarding claim 18, referring to claim 11, Soumiya suggests that the acceptance algorithm is started only once per connection to be one of potentially added and released (Fig. 19: call request admission; col. 17, lines 15-67; and col. 21, lines 4-29).

### *Conclusion*

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Key et al (USPN 5,521,971). Hayano et al (USPN 5,132,966). Shah et al (USPN 5,917,804). Park et al (USPN 5,872,771). Berger et al (USPN 6,160,818).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (703)305-6970. The examiner can normally be reached on Mon.-Fri. 7:00-5:00 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703)308-6602. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-6743 for regular communications and (703)308-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

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Daniel J. Ryman


Examiner

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DJR

Daniel J. Ryman

March 14, 2003

  
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